

# Work Order ID 58115

April 26, 2010 8:29:34 AM



Page 1

Item ID: D205-634-041

Accept



Setup Start



Revision ID:

Item Name: Replacement Skidtube

Stop



Start Date: 26/04/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 30/04/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan: *H*

Date: *10-4-24*

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D2580

Rev D

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy D205-634 bluefile & type labels per PPP D205-634-041 CHG002

*S 10/05/12*

*HJ 42 BG 10/05/12*

110

0.00



BENDING MACHINE - SKIDTUBES

CNC Bend 1

Memo

0.00

CNC Delta 100 Bender

1-Bend as per program D2580.C on CNC Bender and Folio FT009

2-Cut tubes as per Dwg. D2580

*> DP 10-5-4*

*① 58115*

W/O:			WORK ORDER CHANGES					
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120		0.00							
Skidtubes									
Skidtubes	Memo	0.00							
	1- Deburr ends								
	2- C'sink holes as per dwg without cutting fluid								
	3- Prepare tube for welding, remove alodine as required.								
	4- Scribe batch number insied aft end of tube.								
130	QC5- Inspect part completeness to step on W/O	0.00							
QC									
Quality Control	Memo	0.00							

(9)

D

BE10/05/05

8 10/05/05

(11)

W/O:			WORK ORDER CHANGES					
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

140

0.00



Skidtubes

Memo

0.00

Skidtubes

1-Weld step D2576 as per Dwg. D2580 and QSI 004  
A/R□□□ Aluminum Rod *M112860**BE 10/05/05*

2-Prep per QSI 005 and weld crossbolt spacers D2579 as per Dwg. D2580, QSI 004.

For D2579 spacers, weld one side, pass 3/8" drill, weld other side, pass 3/8" drill  
A/R□□□ Aluminum Rod *M112860**BE 10/05/05*

3-Grind welds as per Dwg D2580 Grind flush ridge made from bending

4-Drill holes for wearplates using DT 8217 & DT8937 Open holes to 19/64",  
adjust stopper not to hit web. Deburr5-Counterbore crossbolt spacers to 7/16" ID x 1.0" deep as per Dwg D2580.  
Deburr holes*BE 10/05/05*

6-Drill pilot holes for aft cap using DT 8215 Open holes to 0.208". Deburr

7-Drill pilot holes for Tow ring using DT8091, open to .640" and Deburr

W/O:			WORK ORDER CHANGES					
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Run Start  
Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

150

QC10- Inspect visual per QSI004- ground welds

0.00



QC

Memo

0.00

Quality Control

S wlor 106

160

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

S wlor 106

170

Pressure Wash per QSI005 4.3

0.00



HandFinish

Memo

0.00

Hand Finishing

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch and leave fwd cap out of solution.

① BR 10-5-6.

W/O:			WORK ORDER CHANGES					
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Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

180



Powdercoat

Powder Coating

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

M114207

0.00

0.00

⇒ 10/05/06

X1 0

Memo

START TIME:

1:30pm

OVEN TEMPERATURE:

3209

FINISH TIME:

2:00pm

190



QC

Quality Control

QC3- Inspect Part Finish

0.00

0.00

Memo

① 10-5-7

W/O:			WORK ORDER CHANGES					
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

200

0.00



HandFinish

Memo

0.00

Hand Finishing

1-Install inserts & wearplates & Gaskets as per Dwg. D2580. Use a drop of Sikaflex on insert holes before installing wearplates.

A/R ☐ ☐ ☐ Sikaflex-291

Sikaflex expire date: 10/08

2-Coat D2594-3 O' rings with Petroleum Jelly and install on D2594-1 plugs as per Dwg D2580

3-Inspect for foreign object per QSI 024

4-Install 2855 Aft Cap as per Dwg D2580 and seal Fwd Step & Aft Cap with Sikaflex. Clean excess adhesive

A/R ☐ ☐ ☐ Sikaflex-291

Sikaflex expire date: 10/08

5-Wing Walk as per Dwg D2580 and QSI 005 4.4

Batch: 114432

①

114 10-57.

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QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210 	QC5- Inspect part completeness to step on W/O	0.00	8 w/05/10						
QC Quality Control	<b>Memo</b> Inspect Aft Cap, Fwd Step and Wing Walk of work to Current Step Inspect for Foreign objects per QSI 024	0.00							
220 	Packaging	0.00							
Packaging Packaging	<b>Memo</b> Identify and pack for shipping as per PPPD205-634-041 Location: PPP Rev: <u>I</u>	0.00							11/05/12
230 	QC21- Final Inspection - Work Order Release	0.00							
QC Quality Control	<b>Memo</b>	0.00							10/05/17

10/05/17

10-5-13

①

W/O:			WORK ORDER CHANGES					
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Page 1

Work Order ID: 58115

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

Comments: IPP Rev: N 02.08.28 FP was QC5 in Step 27; Added QC5 to Step 30 KJ  
 IPP Rev P 10.02.19 per PAR09-043 EC verified by: DD  
 IPP Rev. O 06.02.28 Added paperwork EC  
 IPP Rev: P 07-07-09 SS Wearplates & Gaskets JLM

Start Date: 26/04/2010

Required Date: 30/04/2010

Start Qty: 1.00

Required Qty: 1.00

D2580-1

Manufactured No

110

Each

6.0000

1.0000



205 Skidtube bent detail

## Warehouse

## Loc Qty

## Loc Code

### Location

Main Warehouse

B58090 ①

LG

57028

57188

57347

57902

6

1

1

2

2

DD 10-5-4

D2576-3

Manufactured No

140

Each

118.0000

1.0000



Step (maching detail)

## Warehouse

## Loc Qty

## Loc Code

### Location

Main Warehouse

LG

46661

52215

118

70

48

L BE 10/05/05

D2579

Manufactured No

140

Each

353.0000

20.0000



Crossbolt Spacer

## Warehouse

## Loc Qty

## Loc Code

### Location

Main Warehouse

LG

57052

57348

353

53

300

20 BE 10/05/05

W/O:			WORK ORDER CHANGES					
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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 IPP Rev P 10.02.19 per PAR09-043 EC verified by:DD  
 IPP Rev. O 06.02.28 Added paperwork EC  
 IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM

Start Qty: 1.00

Required Qty: 1.00

D2855 Manufactured No 200 Each 117.0000 1.0000



Cap



## Warehouse

## Loc Qty

## Loc Code

### Location

Main Warehouse

FP6

2

56613

2

Main Warehouse

ST026

115

50513

1

50770

30

51539 ✓

30

53791

54

1 BR 10-5-7

AN3-5A

Purchased No

200

Each

1,013.000 2.0000



Bolt



## Warehouse

## Loc Qty

## Loc Code

### Location

Main Warehouse

ST350

1013

105057 ✓

1013

2 BR 10-5-7.

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Shop Packet Print

Page 2

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Start Date: 26/04/2010

Required Date: 30/04/2010

Start Qty: 1.00

Required Qty: 1.00

AN960JD10L

Purchased

No

200

Each

4,415.000 2.0000



Washer



## Warehouse

## Loc Qty

## Loc Code

### Location

Main Warehouse

ST348

4415

ALS7-1032-130

Purchased

No

200

Each

138.0000 50.0000



Insert



## Warehouse

## Loc Qty

## Loc Code

### Location

Main Warehouse

ST282

138

113238

138

AN3C4A

Purchased

No

200

Each

1,649.000 50.0000



BOLT



## Warehouse

## Loc Qty

## Loc Code

### Location

Main Warehouse

ST350

1649

114103

501

114108

300

114330

348

114416

500

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Page 3

2 BR 10-5-7.

ALS4-1032-130

50. BR 10-5-7.

50. BR 10-5-7.

W/O:			WORK ORDER CHANGES					
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Start Date: 26/04/2010

Required Date: 30/04/2010

Start Qty: 1.00

Required Qty: 1.00

AN960C10L	Purchased	No	200	Each	0.0000	50.0000
washer						
D3566-13	Manufactured	No	200	Each	48.0000	1.0000
Gasket						

WAS 1149C0332R

114341

50 BR 10-5-7.

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		

Main Warehouse

FP

48

53461 ✓

48

Manufactured No

200

Each

36.0000

1.0000

1 BR 10-5-7.

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		

Main Warehouse

FP015

36

56829

4

57526 ✓

12

57682

20

1 BR 10-5-7.

D3566-5



Gasket

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Start Date: 26/04/2010

Required Date: 30/04/2010

Start Qty: 1.00

Required Qty: 1.00

D3566-1 Manufactured No 200 Each 49.0000 2.0000



Gasket

Warehouse  
Location

Loc Qty

Loc Code

Main Warehouse

FP015

49

57257

13

57715

36

D3564-11 Manufactured No



Wearshoe

200 Each 9.0000 1.0000

Warehouse  
Location

Loc Qty

Loc Code

Main Warehouse

FP19

9

57259

9

D3564-13 Manufactured No



Wearshoe

200 Each 29.0000 1.0000

Warehouse  
Location

Loc Qty

Loc Code

Main Warehouse

FP17

29

56533

17

57684

12

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DATE	STEP		Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
				Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

April 26, 2010 8:29:40 AM

Page 6

Work Order ID: 58115



Parent Item: D205-634-041



Parent Item Name: Replacement Skidtube

Start Date: 26/04/2010

Required Date: 30/04/2010

Comments: IPP Rev:N 02.08.28 FP was QC5 in Step 27; Added QC5 to Step 30 KJ  
 IPP Rev P 10.02.19 per PAR09-043 EC verified by:DD  
 IPP Rev. O 06.02.28 Added paperwork EC  
 IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM

Start Qty: 1.00

Required Qty: 1.00

D3564-9 Manufactured No 200 Each 20.0000 1.0000



Wearshoe



Warehouse  
Location

Loc Qty

Loc Code

Main Warehouse

FP

1

55334

1

Main Warehouse

FP019

19

57260

8

57685 ✓

11

1 BR 10-5-7.

D3564-5 Manufactured No 200 Each 16.0000 1.0000



Wearshoe



Warehouse  
Location

Loc Qty

Loc Code

OFFSHORE

FG

2

34806

2

Main Warehouse

FP

2

55333

2

Main Warehouse

FP19

12

57525

12

1 BR 10-5-7.

April 26, 2010 8:29:40 AM

Shop Packet Print

Page 6

W/O:			WORK ORDER CHANGES					
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:			WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP		Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
				Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

April 26, 2010 8:29:40 AM

Page 7

Work Order ID: 58115

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

Comments: IPP Rev:N 02.08.28 FP was QC5 in Step 27; Added QC5 to Step 30 KJ  
 IPP Rev P 10.02.19 per PAR09-043 EC verified by:DD  
 IPP Rev. O 06.02.28 Added paperwork EC  
 IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM

Start Date: 26/04/2010

Required Date: 30/04/2010

Start Qty: 1.00

Required Qty: 1.00

D2594-3 Manufactured No 200 Each 171.0000 16.0000



O-Ring, 205 Skidtube

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

FP

58191

171

55546

171

16. BR 10-5-7.

D2594-1 Manufactured No 200 Each 600.0000 16.0000



Plug, 205 Skidtube

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

FP

42807

600

55002

112

57826

282

206

16. BR 10-5-7.

W/O:			WORK ORDER CHANGES					
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**DART**

DESIGN <i>JS</i>	DRAWN BY <i>PH</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>JS</i>	APPROVED <i>JS</i>	DRAWING NO. D2580	REV. D SHEET 1 OF 3
DATE 07.02.27		TITLE 205 SKIDTUBE ASSEMBLY SCALE NTS	
A	96.09.16	NEW ISSUE	
B	96.12.02	AS MANUFACTURED	
C	98.08.26	REDRAWN, INCLUDED DEO 9094/9097	
D	07.02.27	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/9183	

**RELEASED**  
07-06-28 *JS*

QTY -041	QTY -045	Part Number	Description
X		D2580-041	SKIDTUBE ASSEMBLY
	X	D2580-045	SKIDTUBE ASSEMBLY
1	1	D2500-1-190	EXTRUSION
1	1	D2576-3	STEP
20	24	D2579	CROSS BOLT SPACER
16	16	D2594-1	PLUG
16	16	D2594-3	O-RING
1	1	D2596	205 WEB
1	1	D2855	AFT CAP
1	1	D3564-5	WEARSHOE
1	1	D3564-9	WEARSHOE
1	1	D3564-11	WEARSHOE
1	1	D3564-13	WEARSHOE
2	2	D3566-1	GASKET
1	1	D3566-5	GASKET
1	1	D3566-13	GASKET
50	50	ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
50	50	AN3C4A	BOLT
2	2	AN3-5A	BOLT
50	50	AN960C10L	WASHER
2	2	AN960JD10L	WASHER

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED CO  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 38115

P/10-4-26

**GENERAL NOTES:**

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) ALL DIMENSIONS ARE IN INCHES
- 3) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 4) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 5) USE DART DRILL TEMPLATE TD2577-205 TO LOCATE AND DRILL  $\varnothing 0.297$  HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION D-D (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND AN960C10L WASHERS WITH SIKAFLEX-241/-291.
- 6) WELDING TO BE DONE PER DART QSI 004.
- 7) FINISH:  
SEE NOTES ON  
PAGE 2 FOR D2580-041 AND  
PAGE 3 FOR D2580-045
- 8) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES).

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W/O:			WORK ORDER CHANGES					
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:			WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP		Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
				Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

RELEASED  
07-06-28

Diagram illustrating the grinding locations for the propeller cross-section:

- GRIND FLUSH (4 PLACES)
- GRIND FLUSH
- D2576-3 STEP
- GRIND FLUSH
- LOCATION RIDGE ON UNDERSIDE OF D2576

Diagram illustrating the assembly of a circular component with a central hole and a rectangular slot. The diagram includes the following annotations:

- DRILL PRIOR TO D2855 CAP INSTALLATION (2 PLACES)
- AN3-5A BOLT (1)
- AN960/D10L WASHER (1) (2 PLACES)
- D2855 CAP
- SEAL WITH SIKAFLEX-241/-291
- 0.40

D2579 SPACER

D2596 WEB (REF)

ALS7-1032-130 (REF)  
(TYP 50 PLACES)

AFTER PERFORM

1. CHA
2. INS
3. WE
4. C/B

AFTER DRILLING AND BENDING ASSEMBLY  
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:

1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (20 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP

37.50  
DISTANCE TO AFT END  
OF D2598 WEB  
3 7  
ø0.508 (TYP.)  
(40 PLACES)  
REFER TO DETAIL A  
1.750 1.750  
8.750  
17.375  
26.000  
34.188  
57.313 (REF)  
7 EQUAL SPACES  
8.188 PITCH  
38.0  
91.500  
190.0  
(D2500-1)  
REFER TO DETAIL A

WELD AS PER DETAIL B

BLACK ANTI-SKID TO 0.5 ABOVE LOCATION RIDGE

BLACK ANTI-SKID TOP OF STEP TO 0.5 ABOVE BOTTOM EDGE

0.5 1.5 1.5 D

8

1.5 1.5 1.5

P P P P P P P

REFER TO DETAIL C

D3566-1 D3566-5 D3566-1 D3566-13

D3564-11 D3564-5 D3564-9 D3564-13

AN3C4A BOLT (1)  
AN960C10L WASHER (1)  
(50 PLACES)

DESIGN DRAWN BY

i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB POWDER COAT ASSEMBLY GLOSS WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3 BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4

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**DART** DART AEROSPACE LTD.  
HARRISVILLE, ONTARIO, CANADA

DRAWING NO.	REV. D
D2580	SHEET 2 OF 3
TITLE	SCALE
205 SKIDTUBE ASSEMBLY	1:24

W/O:			WORK ORDER CHANGES					
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:			WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP		Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
				Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



RELEASED  
07-01-28

Diagram illustrating the grinding locations for the D2576-3 step. The diagram shows a cross-section of the step with the following labels:

- GRIND FLUSH (4 PLACES)
- GRIND FLUSH
- D2576-3 STEP
- GRIND FLUSH
- LOCATION RIDGE ON UNDERSIDE OF D2576
- 4

Diagram illustrating the location of the D2855 cap and the AN3-SA bolt on the rear of the engine. The diagram shows the cap and bolt assembly, with labels indicating the required drilling and sealing steps.

- DRILL PRIOR TO D2855 CAP INSTALLATION (2 PLACES)
- SEAL WITH SIKAFLEX-241/-291
- AN3-SA BOLT (1)
- AN960JD10L WASHER (1) (2 PLACES)
- D2855 CAP
- SEE NOTE ii)
- 0.40

5

D2579 SPACER

D2596 WEB (REF)

AL57-1032-130 (REF)  
(TYP 50 PLACES)

AFTER DRILLING AND BENDING ASSEMBLY  
PERFORM THE FOLLOWING FOR #0.508 HOLES ONLY:

1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (20 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C-BORE D2579 SPACER TO  $\phi 0.437 \times 1.00$  DEEP

- i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB POWDER COAT ENTIRE ASSEMBLY GREEN (REF. 4.3.5.8) PER DART QSI 005 4.3 BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4
- ii) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE WITH THE SPACER AT THIS LOCATION

[illegible]

Figure 1: Plan view of the proposed road layout showing dimensions and stationing. The diagram illustrates a road alignment with various segments and curves. Key dimensions include a 1.4m offset, a 5.985m segment, a 51.340m segment, a 3.630m segment, a 39.580m segment, a 5.915m segment, a 20.0m segment, and a 32.0±1.0m segment. Stationing points are marked as 5.338 (REF) and 3.630 (REF). A curve with a radius of 0.640 is shown, with 8 places of 0.508. A 1.0m distance between hole and tangent point is indicated. A 13.4m segment is also shown. A 4m offset is indicated at the start of the curve.

0.5

1.5

1.5

H

H

P

P

P

P

P

P

P

NO C'BORE  
NO PLUG

REFER TO DETAIL G

BLACK ANTI-SKID TO 0.5  
ABOVE LOCATION RIDGE

BLACK ANTI-SKID TOP OF STEP  
TO 0.5 ABOVE BOTTOM EDGE

WELD AS PER DETAIL F

NO C'BORE  
NO PLUG

NO C'BORE  
NO PLUG

D3566-1

D3566-5

D3566-13

D3564-11

D3564-5

D3564-9

D3564-13

AN3C4A BOLT (1)

AN960C10L WASHER (1)

(50 PLACES)

8

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07 02 27

205 SKIN

ASSEMBLY

REV. 0

SHEET 3 OF 3

SCALP

W/O:			WORK ORDER CHANGES					
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP		Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
				Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

NO. 220

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barclay Elliott  
Job number: 576830  
Part number: D205-634.041  
Description: 205 skid tube  
Welding Process: Tig[☒] Mig[ ]  
Base material: Aluminium  
Current: AC[☒] DC[ ]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[ ]  
Penetration: pass[☒] fail[ ]

UNACCEPTABLE

Cracks: pass[☒] fail[ ]  
Undercut: pass[☒] fail[ ]  
Pin holes: pass[☒] fail[ ]  
Overlap (cold lap): pass[☒] fail[ ]  
Porosity (surface): pass[☒] fail[ ]  
Coloration: pass[☒] fail[ ]

Qualifier Pat Doherty Date of Test Coupon 10.04.27

Welder Barclay Elliott Date of Test Coupon 10.04.27

The above named individual is qualified in accordance with AWS D17.1.2001 to weld